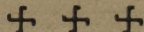


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AUGUST-SEPTEMBER, 1907

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Entered at the Washington Post-office as Second-class Matter

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ico, which is \$3, and Canada, which is \$3.25. Requests for free specimen copies can not be honored. Subscrip-
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PROFILE OF GREEK FIGURE AT VASSAR [FIG. 2]

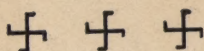
RECORDS ^{OF} THE PAST

VOL. VI



PARTS VIII-IX

AUGUST-SEPTEMBER, 1907



GREEK DRAPED FIGURE AT VASSAR

VASSAR COLLEGE has recently received from Mrs. F. F. Thompson a gift of three antique marbles, a large draped statue of a woman,¹ a high relief with a Roman portrait head executed in the round, and a bust surmounted by a head in the style of Polykleitos. The appearance of all three marbles is deceptive, owing to copious and erroneous restorations, for which neither the donor nor the present possessor, but the collector of the Renaissance time is responsible. When the Giustiniani collection, to which the marbles once belonged, was brought together, people were unable, or at least unwilling to enjoy the beauty which a broken antique possessed. They desired to have entire statues in their collections, and since hardly any ancient marbles are preserved intact, the remains had to be pieced to make a new whole. The Renaissance sculptors, moreover, in spite of their skill, did not understand the simplicity of Greek sculpture, and whether they had to do with a Greek original or a Roman adaptation, restored both according to very conventional prejudices regarding characteristic poses, and in so doing were guided by the wishes of their employers. These latter, if they already possessed a Nymph, or an Aphrodite, but lacked a Demeter, had their new torso restored as Demeter, unconcerned as to whether it really was a Nymph or Aphrodite, or anything else. The most apparent defect of such erroneous restorations is the false note which

¹Mentioned Matz-Duhn, *Antike Bildwerke in Rom*. No. 724; and pictured Clarac de poche (*Reinach, Répertoire*, Vol. I), plate 433, No. 3.



FRONT VIEW OF GREEK FIGURE [FIG. 1]

they introduce into the rhythm of a statue. This is very obvious in the Vassar large draped statue, Figures 1-3. She has been advantageously placed in the rotunda of the college library, but from no point of view does she offer an altogether pleasing appearance. There is no unity in the lines of the figure; her proportions seem wrong, and her arms especially are disturbing, if taken in connection with the rest of the body. They are faulty restorations and should be imagined away. Equally erroneous is the restoration of the lower part of the drapery and the feet. The left leg was bent in the knee, as is clearly seen in Figures 1, 2, and 4, where the knee appears between the two ends of the outer garment. The thin under garment, moreover, fastened by the girdle about the slender form, could not have fallen in the heavy folds now visible below the mantle.



BACK OF GREEK FIGURE [FIG. 3]

The head of the statue (Figure 5), singularly attractive in spite of its modern nose, was broken at the neck, and has been added to the torso at a wrong angle. It thus silences the beautiful rythm which surges even to-day through the exquisite torso (Figure 6).

Not to speak of many minor restorations, such as the faulty joining of the ends of the mantle in the lap of the figure, only one more criminal act of the restorer needs mention. The right hip of the figure originally pressed out to the right (Figure 3), and had been damaged or broken away. Instead of piecing the statue the restorer decided to work over the remaining parts to a semblance of accuracy. The result has been an irretrievable loss of beauty to the line which originally curved from the shoulder along the side of the body and over the hip, down the leg, where it was gracefully interrupted by the projecting folds of the cloak; and, secondly, a hip which for the anatomy of this woman is inches too low.

Granted then, that these several errors of the restorer have been unable to give back to the broken marble the nobility of its original appearance and have almost hidden from view the charms that still remained, these charms nevertheless are so irresistible that even the casual observer can not escape them. Was sweet dignity ever expressed with simpler means than that which shows in the upper part of this body (Figure 6)? Or was heavy drapery ever cast in more magnificent folds and with greater restraint, than the mantle which, fallen from the shoulders, shrouds the legs of this virgin—goddess (Figure 4)?



DRAPERY OF FIGURE AT VASSAR [FIG. 4]

The student of art naturally asks who was the sculptor of this statue, and in his endeavor to answer this question desires to define the date of its origin. That the statue was Greek and not Roman is certain. Whoever knows ancient art feels this instinctively. In addition there are indications of a technique, which finds its parallel not with the Romans, but with the Greeks. I refer to the carving of the folds. The Romans and later restorers made long, narrow, and fairly deep grooves in the folds of draperies by means of a square-grooved chisel, which they ran the entire length and then abruptly removed. This gives a peculiar sharp termination and deep shadow to the end



TORSO [FIG. 6]

of a fold. The Greeks never used this method except in places which were not to be seen. The drapery of the Vassar figure shows such folds only in those parts which are undoubted restorations. The treatment of the fine folds of the under garment about the breasts, moreover, finds many parallels in Greek sculpture, and none in that of the Romans.

The delicate, but by no means primitive rhythm, of the torso precludes any date earlier than the end of the V century,² while one definite indication would seem to point to a date even later than Praxiteles. This is found in the artistic use of the drapery. The artist wished to carve a draped figure, but instead of conceiving his figure as a nude plus a garment, he gave it the contours of the nude on which he carved, in relief as it were, the folds of a thin chiton. Not even the girdle projects, but is indicated by heavy grooves above and below it (Figures 3 and 6). The resulting shadows give rise to the illusion that they were cast by the projecting girdle.

Drawing conclusions from these observations as to the general attitude of the artist toward his art, one finds that it was akin to that of him who carved the Aphrodite of Melos.³ This latter figure is variously dated either at the end of the IV century before Christ, or in the long Autumn Days of Greek Sculpture from the death of Alexan-

²Contrast it e. g. with that of the Barberini Hera, *Handbook of Greek and Roman Sculpture*, by E. von Mach, plate 105.

³Compare the Aphrodite of Melos with the so-called Aphrodite of Arles, probably the Spinning Girl of Praxiteles, *Greek Sculpture, Its Spirit and Principles*, by E. von Mach, plate 35, figs. 1 and 2.

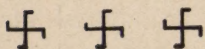
der to the conquest of Corinth. The endeavor to find the date of this statue more accurately, and consequently to ascertain the name of its artist would be futile, because there are not sufficient data to prove a case. At best one could make only a plausible guess. One thing, however, is sure, Vassar College possesses in this statue a singularly exquisite example of good Greek art.

EDMUND VON MACH.

Cambridge, Mass.



HEAD [FIG. 5]



MAYA RUINS IN QUINTANA ROO

COUNT MAURICE DE PERIGNY, the second explorer to enter the Maya village of Ycaiché, state of Yucatan, has rendered a very valuable service to the cause of archæology by his important investigations in Quintana Roo, and the remarkable discoveries which rewarded his zeal after many obstacles were overcome and countless contiguous hardships endured. But as a result of his explorations he experienced the satisfaction of finding 4 groups of ruins which were hitherto unknown to the civilized world of the present day, and his discoveries will be described at length in the reports which he will make to the National Museum, of Mexico City, and the Geographical Society of Paris.

The 4 groups of Maya ruins recently discovered by Count de Périgny are in the southern part of Yucatan, some distance from the Maya village of Ycaiché. Although they are not as well preserved as the Maya ruins of northern Yucatan, their simple style of architecture—still strong and effective, though but the crumbling remains of an ancient civilization—leads Count de Périgny to attach considerable importance to their discovery. At any rate they carry out the theories

already advanced as to the well-developed state of society which existed in America prior to the Conquest.

Though Count de Périgny is not prepared to state that the Mayas were directly connected with the Toltees from Palenque, he thinks that his discoveries will demonstrate the fact that the Mayas of southern Yucatan may be identified with the Mayas of northern Yucatan, thus pointing out a distinct line of migration on the part of the Mexican Indians.

One of the chief reasons why the unknown parts of Quintana Roo have hitherto been unexplored is easily accounted for by the fact that a large number of the Mayas are still in a state of rebellion, and extremely hostile in their attitude to strangers. But Ycaiché, a village of about 400 inhabitants, has been pacified by the government, and has for its chief magistrate General Tun, a Maya chief.

Then there is another unfortunate feature which makes the thorough exploration of Quintana Roo a matter of much difficulty—a temperature that makes the stranger so susceptible to fever. It is so very hot in the daytime and so very cool at night that the average stranger is apt to contract fever in a short time, and it was this that caused Count de Périgny to return to Mexico City before he had entirely completed the investigations of his last trip—in order to recuperate from a very high fever. He was seized with a fever while at a distance of several days from Ycaiché, and but for the faithfulness of the Indians his fate would have been a matter of short notice.

Among the difficulties which heightened the Count's satisfaction with the success of his explorations was that obstacle commonly known as work. After a few days with the Mayas it became painfully apparent to Count de Périgny that if anything was to be done he had to do it himself—or at least take a leading part in the procedure. When it came to clearing away the trees and undergrowth—and sometimes this meant several days of hard labor before a glimpse could be obtained of the surface of a ruin—he had to take the big end of the job in order to show the Mayas that it was worth while. Otherwise, they would have had their doubts as to the possibility of anything worth while being discovered—if it was a matter of labor in the tropics.

RUINS OF CHOCOHA

The recent trip of Count de Périgny was his third to the peninsula of Yucatan. On his trip this year he left Payo Obispo, at the mouth of the Rio Hondo, and went by boat to Esperanza, from there proceeding to the village of Ycaiché. He had planned to go to the ruins of Nacun, which he had discovered last year in Peten, Guatemala, but subsequent events led him to postpone this trip.

It was while in Ycaiché that the count heard of two pyramids at some distance from the village, and after considerable difficulty finally

located them. When the trees were cut down and the undergrowth removed, it was found that the ruins were grouped in a half-circle of edifices and monuments, almost entirely eaten away by the ravages of time, though on the side of one of the ruins the remains of a stairway of stones was fairly well preserved.

On account of the proximity of a spring of hot water a short distance from these ruins, Count de Périgny thought it appropriate to call them the ruins of Chocoha, which is the Maya designation for *agua caliente*.

RUINS OF RIO BEQUE

But before making the more extensive exploration which he contemplated Count de Périgny decided to examine the ruins of Rio Beque, which he had previously discovered 4 days north of Ycaiché. As he does all of his traveling on foot in order to take notes of the topography and other essentials of exploration work, this side trip was not the beautiful jaunt that it may appear to be on the map. His baggage was borne by pack-mules, but he walked with the Indians who accompanied him.

At the ruins Count de Périgny had some trouble with his Indians, who were afraid to climb to the top of the edifices, and consequently he was compelled to do most of the work himself. He found the façade on the north of the largest edifice to be 40 meters in length and over 8 meters in height. A large part of the façade had been worn away, and it was easy to see the remains of a great number of interior chambers as well as the triangular arch which is characteristic of the architecture of the ancient Mexicans.

The ruins of Rio Beque, named by Count de Périgny after the river Beu Beque, are similar to the other ruins of southern Yucatan. At the foot of these ruins he found a few blocks of stone with sculptured signs, but as they were in very bad shape he has no theory as to their import. There is also evidence that the façade of the main edifice was elaborately ornamented with blocks of stone of a similar design.

Count de Périgny is not absolutely certain as to what the main edifice of the Rio Beque ruins was used for in its former period of habitation, but he says it was probably the temple of Maya priests or a *casa de cacique*.

NOHOCHNA AND YAABICHNA

After his return to Ycaiché Count de Périgny decided to devote the rest of his time to the exploration of the three groups of ruins which he had found near the Laguna de Hon, and set out for Xcopen. The first of the groups which he investigated he has designated as Nohochna, the Maya for *casa grande*—so called on account of its chief edifice, which appears to have been a great mansion in its days of grandeur.

These ruins were found to be decidedly different from Uxmal, Chichen Itza, and other ruins of northern Yucatan, and have little similarity to the ruins of Rio Beque. They have the same simplicity of lines, but the principal façade faces the east, being 15 meters high and 18 meters long. It is ornamented with pilasters.

At a distance of about 500 yards from the ruins of Nohochna another group of lesser importance was discovered, and after another day of exploration a very high pyramid was found in the same region. A monument surmounts the summit of this pyramid, and the disintegrated portions of the walls reveal a remarkable number of interior chambers. In fact, Count de Périgny decided to designate this group as the ruins of Yaabichna—the Maya for house of many rooms.

It was on the wall of one of these rooms that the Count discovered, after groping his way through the underground passages, a large number of Maya hieroglyphs. As his only light was furnished by a torch in the hands of an Indian his investigation of the interior was not very easy, but he observed that the serpent's head appeared as one of the most numerous signs—which seems to be a characteristic sign among all the ancient Mexicans.

RUINS OF A MAYA TOWN

At a distance of about 8 leagues from these two groups the ruins of what seems to have been a small city were discovered, and Count de Périgny has designated these ruins as Nohcacab, which is the Maya for a large town. An avenue about 10 meters wide and nearly 200 yards long leads to a pyramid, which was probably a temple of the Maya priests. It measures 15 meters at the base, 5 at the summit, and is about 16 meters high.

On the opposite side of this temple are the ruins of the town, built in the form of a square, with an interior court. These ruins have been badly damaged by the rains which are so prevalent in that region. The principal façade faces the north and east, being approximately 40 meters in height.

The discovery of this town, which has been dead to the world for centuries, satisfied Count de Périgny as to the importance of his investigations, and tended to confirm his theory that the ruins of southern Yucatan demonstrate the fact that the region was at one time inhabited by Indians who might have worked out a better civilization of their own, but for the invasion of the European. In fact, he thinks the special style of architecture characteristic of these ruins is a remarkable tribute to the extinct civilization of the ancient Mexicans, even though the hand of old Father Time has been ruthless in its wanton wreck of the past.

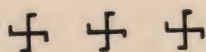
LE COMTE MAURICE DE PERIGNY.*

Mexico City, July 23, 1907.

*This interview, although left in the third person, was revised by Count de Périgny and forwarded us for publication, so that it has the authority of a signed article.



SWASTIKA ON THE CLIFFS ABOVE A PUEBLO RUIN IN CANYON DEL MUERTO, ARIZONA



THE SWASTIKA

TO ARCHÆOLOGISTS and students of religion and art, the Swastika has been for many years a fascinating but tantalizing study. It is the theme of a no mean literature, its bibliography bearing the names of some of the world's best-known scholars.¹ The name and symbol are now becoming generally familiar because of the introduction everywhere for sale of all sorts of Swastika jewelry, and even table wear. A popular magazine, not long ago, started a Swastika club in connection with its subscription work. The objects sold are usually accompanied by some brief attempt at information and an appeal to superstition. "To the wearer of the Swastika will come from the four winds of heaven good luck, long life, and prosperity." "Swastika, proof against hoodoos." One

¹For bibliography up to 1894, see the comprehensive, fully illustrated work, *The Swastika*, by Edward Wilson, Curator Department of Prehistoric Anthropology, U. S. National Museum. Annual Report of the Smithsonian Institution for the year ending June 30, 1904. See, also, *The Migration of Symbols*, by Count Goblet d'Alviella, an alluring classic often quoted. London, 1894.

of the oldest symbols, its beginnings reaching to an antiquity long preceding history, its use continued to some degree through the ages, it has suddenly been given new life in our own land by this amulet-wearing fad.

The name Swastika, given this unique form of cross, may be called modern, since it is not the original name, and might be applied to any amulet. This name can be traced to about the IV century B. C. There is general agreement that the word is Sanscrit, from *SU*, equal to the Greek *ευ*, "well," and *AS*, "to be," form *asti*, "it is," with suffix *ka*, the whole popularly meaning "good luck."²

This name is now accepted practically in all countries, though its use has been objected to as implying too strongly that India was the original home of the symbol. Other names less familiar in this country have been given it, one of the most widely used being "Fylfot," meaning "many-footed." But Murray and Bradley define this first as "Fill-foot," referring primarily to a pattern or device for filling the foot of a painted window, and then "a name for the figure, called also cross-cramponée, and identical with the Swastika of India."³ Gam-madion (so called because the extremities are bent back so as to form four Greek gammas joined at the base), tetraskēle, and other names have been applied to the symbol, but doubtless it was in existence long before any of the present names, before the Buddhist religion and before the Sanscrit language. It is to be noticed further that the name Swastika gives no light as to the original meaning of the symbol, but is only a designation appropriate to a late stage of its history, "Swastika, a mystical mark made on persons or things to denote good luck."⁴

The wide distribution of the Swastika symbol, including almost every country, is a remarkable fact. As an antiquity it has been found in Japan, China, and Tibet, probably having been adopted in these countries with Buddhism from India where it is quite frequent, especially associated with Buddhist objects.⁵ Persia affords examples, though it is said to be wanting among the more ancient remains. Dr. Henry Schliemann's discoveries of the Swastika at Old Troy, in the Third City, but not anterior, the city he considered the Homeric Troy, place it, at that point, at a period 1200 or 1300 years B. C.⁶ Most of

²This is Prof. Max Müller's definition, given in his letter to Dr. Schliemann, *Ilios*, pp. 517-521. It would correspond to the Greek *εὖστακῆς*. The *New International Encyclopedia* devotes nearly two columns to the Swastika, translating the word "weal-making."

³A *New English Dictionary on Historical Principles*, Oxford, 1901. Uncompleted.

⁴Sir Monier Williams, *Sanskrit Dictionary*.

⁵Mr. A. C. Haddon, *Evolution in Art*, as illustrated by the life-histories of designs, Charles Scribner's Sons, 1895, and referred to below, refers to the unscrupulousness of Buddhism, in appropriating to its own use the images of worship paid by natives of India to the sun, to fire, or to serpents, ascribing the rites to its own traditions. *Ibid*, as regards distribution, pp. 282-287.

⁶For a description of the many hundreds of objects presenting it, and general treatment of the symbol, with dissertation by Prof. Max Müller, see *Ilios, The City and Country of the Trojans*, Dr. Henry Schliemann. Harper & Bros., N. Y.

the objects bearing the symbol were small whorls.⁷ The Swastika is found in the Caucasus, in Greece, and the adjacent islands as a mint mark, on vases and various sorts of prehistoric pottery, and in decorative work. In Italy it is believed that some of the earliest examples of the Swastika have been found on the Hut-urns.⁸ Early Etruscan vases, for which a date is claimed of from the XII century B. C. to 540 A. D., bear Swastikas. Some students give the date of the arrival of this people in Italy as about 1044 B. C. Hundreds of examples are found on Christian tombs in the Catacombs of Rome. In Austria, Germany, Switzerland, Scandinavia, in ancient mounds on early art work, bronze spear-points and other objects of bronze and iron,⁹ the same symbol appears. France affords examples. In Great Britain it has been found on Celtic funeral urns, Roman votive altars, Christian sepulchres, and other objects. In Iceland, Coomassie, Africa, but only on some bronze ingots, in Central America, Mexico, and South America examples appear. In North America there are many interesting specimens found among the remains of the aboriginal Indians in Illinois, Ohio, Tennessee, Mississippi, and some other states. Prof. Clarence B. Moore, of the Philadelphia Academy of Sciences, among his many other noteworthy archaeological finds, made remarkable discoveries in the pre-Columbian mounds at Moundville, Ala., as recently as the spring of 1905. These mounds, belonging to the copper age, contained among many other objects of value, sheet copper ornaments on which the Swastika occurs, with skeletons which have almost disappeared through age; a water bottle bearing the same design; a gorget with 3 circular lines surrounding a Swastika, and a similar ornament with the symbol within many circles; also a pendant 6 in. long, bearing a Swastika with a triangle below it.¹⁰ It is an interesting fact that thus far the Swastika has not been found in Babylonia, Assyria, Phœnicia, or Egypt as native objects, but only as introduced, for example, on vases from Cyprus and Greece.

The theory of the independent origin of the Swastika quite breaks down in the presence of the facts stated, and the interesting questions of the relations and migrations of nations or persons comes to the front. A Tennessee shell mound ornament, bearing a Swastika, is said to duplicate another found in Sweden. It may be added that the

⁷As this word is omitted from a number of dictionaries and cyclopedias it deserves definition here. A whorl is a weight or fly, usually circular, made of stone, wood, or terracotta, an inch or two in diameter, with a hole, and fastened at the lower end of the spindles of spinning wheels to give proper weight and steadiness. It has also been called Pixy-wheel.

⁸Hut-urn, a type of cinerary urn of pottery found in sites of archaic Italic civilization anterior to the Etruscan or other foreign influence. Ossuaries, in the shape of circular cabins with conical roof, reproducing on small scale the wicker huts of the people of that period. (Century Dictionary.) However different in purpose, these Hut-urns can not but bring to mind the Soul-houses of Egypt, so recently described by Petrie, and which were also models of the houses of their period, 3700-3300 B. C.

⁹See *The Viking Age*, Paul B. Du Chaillu, 1889.

¹⁰For full description and plates, see Prof. Moore's elaborate report, *Certain Aboriginal Remains of the Black Warrior River*, etc. By Clarence B. Moore, Acad. of Nat. Sci. of Philadelphia, 1905, and also *The Treasures of Prehistoric Moundville*, by H. Newell Wardle, Harper's Magazine, Jan., 1906.

very form itself of the cross, not easily made, is not one likely to have been invented by many and widely-separated peoples. Professor Petrie gives a page to the penetrating effect of design and mingled influences of land on land, with interesting illustration, in his *Egyptian Decorative Art*. One of the specific achievements of Count Goblet d'Alviella is his demonstration of the fact that religious symbols have not originated independently, but have been carried from people to people.

There is also what might be called the modern use of the Swastika, a survival representing another and possibly a degenerate stage in its history. It becomes an inheritance used in ignorance. In Turkey and Persia the design has been and is worked in rugs, and can be seen in many such in our own homes and shops. Mr. Perceval Landon, in his story of the recent English expedition, *The Opening of Tibet*, says that the envoys from Lhasa to the English camp had saddle-cloths of Swastika-patterned stuffs. "Invariably there will be found outside a house four things, among them the white and blue Swastika, surmounted by a rudely-drawn symbol of the sun and moon. This sign marks every main doorway in the country."¹¹ Inlaid in the courtyard, in front of the temple at the Monastery of Jang-kor-yangtse, was a boldly-designed Swastika.¹² It is used by some Buddhists as a sign of benediction. The Jains, an offshoot, claim to use it as a symbol of resignation, contentment under all circumstances, in keeping with the strict meaning of the name.

The Navajo, Pina, Sac, and Apache Indians weave the sign in rugs and baskets, and some of them hammer it out of silver for the trade, as is also done in Mexico. The Kansas and Osage Indians are said to introduce the symbol on charts in mourning ceremonies. Work baskets made for women in Japan sometimes show the same. The appeal to its mystery, novelty, and to superstition is made to minister to its sale in many forms.

The question as to where the Swastika first originated is one impossible to answer at present. There are advocates of many places and times. It has been associated with the bronze age, making its way east and west with that age. Of course the Orient, and India especially, was formerly claimed as its birthplace. Mr. W. H. Goodyear presents Greece as an earliest home and suggests that it was an independent and definite shaped pattern belonging to the Greek geometric style.¹³ He endeavors to show that theories based on Buddhist art, which were unknown before the III century B. C., have no weight whatever for early Hindu antiquity. "The supposed Indian home of the Swastika is no more." "The true home is the Greek geometric

¹¹*The Opening of Tibet*, by Perceval Landon, Am. Edition, Doubleday, Page & Co., 1905.

¹²*Ibid.* p. 299.

¹³*The Grammar of the Lotus*, a New History of Classic Ornament as a Development of Sun Worship. William H. Goodyear. London, Sampson Low, Marston & Co., 1891.

style,¹⁴ as will be immediately obvious to every expert who examines the question through the study of that style." He refers also to the overthrow of the theory, which he terms a delusion, which placed the home of the Aryan race in Asia.¹⁵

Mr. A. C. Haddon, to whose *Evolution in Art* reference has already been made, gives an interesting presentation of the subject of religious symbolism. Discussing the Swastika, he says, regarding Mr. Goodyear's argument: "The sequence which he seeks to establish appears to me to be nothing more than the birth of an analogy." "The Trojans came originally from Thrace. There is a plausible tradition to the effect that the ancestors or predecessors of the Etruscans, and in general the earliest known inhabitants of Northern Italy, entered the peninsula from the north or northeast after leaving the valley of the Danube. It is, therefore, in this latter region that we must look for the first home of the gammadion."

Mr. Paul N. Hasluck, referring to the use of the symbol in Greek art, and suggesting that the "Greek pattern" is founded on the Swastika, adds: "It is probable, however, that the Greeks simply used it decoratively, as they did certain other symbols, without knowledge of its hidden signification."¹⁶

The Troad has been claimed as the original home. The Hittites have found an advocate. The Hut-urns of Italy, found under ancient lava and antedating the Etruscan settlers, may yet prove useful in locating the birthplace of the Swastika. As used by the Brahmans and Buddhists, that may be called only a detail of the migrations of the symbol as it was in existence before those religious bodies. The places mentioned do not exhaust the list of claimants.

When we seek for the primitive meaning of this cross we are on even more debatable ground. Theory after theory confronts us, the advocates of widely differing views arguing at times with astonishing positiveness, and adding assertion to evidence. The subject becomes, indeed, fascinating, though it be in some of its phases as mysterious as Melchisidek. All may agree, however, that the Swastika was made at the first with a definite intention and meaning, passing from tribe to tribe. In considering some of the theories we may begin with that interpretation of the symbol given by Mme. H. P. Blavatsky, so long a leader of the theosophical movement. It is given simply as representative of a class of mystical, esoteric views.

"The Suastica is the most philosophically scientific of all symbols, as also the most comprehensible. It is the summary, in a few lines, of the whole work of creation, or evolution, as one should rather say, from Cosmotheogony down to Anthropogony, from the indivisible unknown Parabrahm to the humble moneron of materialis-

¹⁴From 1500 or 1600 B. C. to 700 or 600 B. C.

¹⁵See Isaac Taylor, *The Origin of the Aryans*.

¹⁶*Decorative Designs of all Ages for All Purposes*, Paul N. Hasluck. Cassell & Co., 1899. See also in regard to spirals and frets, Petrie, *Egyptian Decorative Art*.]

tic science, whose genesis is as unknown to that science as that of the All-Deity itself. The Suastica is found heading the religious symbols of every old nation. * * * It is at one and the same time an alchemical, cosmogonical, anthropological, and magical sign, with seven keys to its inner meaning."¹⁷

Well argued claims have been presented that the device was first suggested by forked lightning, and so became a representation of the weapon of the air-god, and the emblem of Zeus or Jupiter as supreme. In Scandinavia it was the hammer of Thor, and some assert found its beginnings in that country. Again it is held that the process of "churning" the sacred fire with crossed sticks led to the use of the form as a sacred symbol representative of the act or of the "vital flame" itself.¹⁸ Again, by a series of evolutions, it has come from the representations of that "fetish of immemorial antiquity," the Lotus. Again, it represents the four cardinal points, and is the supreme symbol for the cult of the cardinal points.¹⁹ By it the four winds of heaven are indicated. It was suggested by the arrangement of stars at certain seasons of the year. In some parts of the world it was evidently a symbol of the earth. It is said to represent in its short arms Time, in its long ones Eternity.

One other theory seems to be so well supported by various lines of evidence as to warrant some elaboration. Suggested by a number of independent scholars it has received an able presentation by Mr. William Simpson in his delightful volume, *The Buddhist Praying Wheel*.²⁰ The sun in the earliest times must have been an object of wonder and worship. From it came light, heat, health, wealth. It appeared as a circle in the heavens, and by its turning movement the succession of the seasons were ensured. The wheel or circle, one of the oldest symbols, common to Brahmanism and Buddhism, but antedating them, and almost universal in use, would naturally be a symbol of this benevolent object or deity.²¹ It would come naturally to represent the idea of dominion, power. From the presentation of the merely physical aspect it would be natural to attribute to the wheel the additional idea of the right, true way, the beneficial path, and so the law. Whatever was according to the path of the sun was of the good way, and that not so was false, of decay, and death. The wheel

¹⁷*The Secret Doctrine*, by H. P. Blavatsky. The Theosophical Pub. Co., London, 1882, Vol. II, pp. 98, 99, and others.

¹⁸See RECORDS OF THE PAST, July, 1907. *The Evolution of the Greek Fret*, by Eunice Gibbs Allyn.

¹⁹H. Newell Wardle, in *Treasures of Prehistoric Moundville*, Harper's Magazine, Jan., 1906.

²⁰*The Buddhist Praying Wheel*, by William Simpson, London. Macmillan, 1896, a work embodying about all the available data at that time.

²¹Interesting in this connection is the statement by Palgrave, quoted by Prof. S. I. Curtis, *Primitive Semetic Religion To-day*, Revell Co., 1902.

"God is for them [the great mass of the Bedouins, with exceptions among the Towarah of the Siniatic peninsula] a chief residing mainly, it would seem, in the sun, with which, indeed, they, in a measure, identify him." p. 126.

represented also progress, on-going. The dominion could not be held back, and to apply the symbolism to the soul, it was in its passage through the circles of existence to Nirvana. "The Lamas, while regarding the symbol as one of good augury, also consider it to typify the continuous moving or the ceaseless becoming, which is commonly called Life."²²

Turning movements are exceedingly ancient and embody these ideas symbolized by the wheel, becoming acts of worship. Circumambulation is still practised as a marked religious exercise, for example at Benares, at Mecca about the Kaabah, about Lhasa, and some Christian communions and secret orders adopt the same in their rituals. The worshiper or procession, as a rule, moves with the right hand toward the altar or building, for the right movement or sunwise, is almost universal.²³ From the earliest Vedas, scholars giving to the Rig Veda a date varying from 1000 to 4000 B. C., we learn that the movement of the sun had been the type of the right movement. The Prayer Wheel takes its place as a means of praise and petition, its movement, properly, being always sunwise.

The Swastika also is one of the oldest of symbols, and well-nigh universal. Mr. Edward Thomas, one of the first authorities on Indian coins, and who published a paper on the Indian Swastika and its western counterparts, and who is quoted by Mr. Simpson, wrote: "So far as I have been able to trace or connect the various manifestations of this emblem, they one and all resolve themselves into the primitive conception of the solar motion, which was intuitively associated with the rolling wheel-like projection of the sun through the upper or visible arc of the heavens as understood and accepted in the crude astronomy of the ancients."

Prof. Max Müller, writing to the *Athenaeum*, speaks of this explanation as decisive, saying: "The emblem of the sun in motion, a wheel with spokes, was actually replaced by what we now call the Swastika; that the Swastika is, in fact, an abbreviated emblem of the solar wheel with spokes in it, the tire and the movement being indicated by the crampions."

Mr. Haddon, in his *Evolution and Art*, referred to above, says: "The view supported by the greatest number of investigators, who have succeeded by their studies of Hindu, Greek, Celtic, and the ancient German monuments in establishing the fact that the Gammadion has been, among all nations, a symbolic representation of the sun, or of a solar god." In further support of this claim the form of the Swastika is urged, rays in motion, and also that the objects most frequently associated with it are representations of the sun and solar di-

²²The *Buddhism of Tibet*, by L. Augustine Waddell, London: Allen & Co., 1895.

²³In northern latitudes especially the sun is seen to rise in the northeast and to travel southward, then in setting to move to the northward to reappear again in the northeast. "Sunwise," therefore, means turning from the left to the right with the right hand as a center. cf. Simpson.

vinities. In some combinations the symbol alternates with signs of the sun. An antique represents Apollo in a car with a Swastika on his breast. Mr. Goodyear cites a number of examples. A water-bottle, discovered at Moundville by Professor Moore, bears an incised decoration of a winged sun and solar ray emblems, and another bottle a Swastika in a circle. The Empress Wu of China, about 704 A. D., invented an emblem of a Swastika enclosed in a circle, the sign for sun. A Greek geometric vase in the British Museum shows the symbol between two solar geese.

This explanation of the genesis of the Swastika and its early associations does not require the giving up of other symbolisms which may have been attached to it. Advocates of the sacred fire, the "Lucifer" of primitive man, of the four cardinal points, and the four winds, may still read their favorite meaning in the cross.

As regards the two forms of the emblem there is, of course, a diversity of opinion. The one which "kicks to the left," Mr. Simpson would connect with death, and refers to the circlings at funerals, which are against the sun, the way of evil, decay. In Scotland, for a long time, the left movement, known as "Widdershins," was unlucky and used as an evil spell. We have light here, perhaps, on the expressions, doing another "a good turn," or a "bad turn." Still, we find many examples of the left Swastika used like the other. So Mr. Landon, relating his observations in Tibet, says: "It is said that the Swastika which revolves to the right is consecrated to the use of orthodox Buddhists of whatever school, and that the Swastika which kicks in the other direction is used only by the Bennpa, the original devil worshippers, whose faith was ousted by the adoption of Buddhism. This is not borne out by the relative frequency of the position of the two Swastikas in Tibet. The left-handed Swastika (*i. e.*, the one which turns to the dexter), is, if anything, the commoner of the two, and the commonest use of this symbol is in the opposition of the two kinds; thus the two halves of a doorway, or the pattern of a rug, will generally offer an example of the two kinds confronted."²⁴

But Mr. Landon is not left in undisputed possession of the field. Colonel Waddell, an authority on Buddhism, speaks of seeing in a monastery near Lhasa a reversed Swastika. He ascribed this to the ignorance of the Lamas. "I noticed that they had figured the lucky fly-footed cross, the Swastika, in the reverse way, that is, with the feet not going in the diurnal course of the sun, or the hands of a clock, but in the opposite direction, which the merest tyro should know is not only wrong, but is the form of this symbol used by the non-Buddhists, indigenous Black-caps, the Bon, and the use of which is regarded by the Lamas as wicked."²⁵ But the Lamas there evidently did not think so, for when expostulated with by the traveler the head

²⁴*The Opening of Tibet*, p. 188.

²⁵*Lhasa and Its Mysteries: A Record of the Expedition of 1903-1904*. L. Augusting Waddell. E. R. Dutton & Co., 1905, p. 323.

Lama did not understand his complaint. More to the point than the modern use in Tibet is the fact that on objects found by Doctor Schliemann, right and left Swastikas occur together. Professor Müller insists that the Sanscrit name refers properly only to the cross with arms pointing to the right, and that the name of the other is Sauwastika. But without reference to the name, which is only of accidents, we may agree that general use indicates that the direction of the arms is of secondary importance to the symbolism.

It was probably an easy transition for the Swastika cross, beginning with whatever signification, to take on the nature of an amulet or good-luck sign, and finally to be used as the horseshoe is so largely in our day, with purely superstitious idea. In parts of Italy the traveler sees large rudely-formed Roman crosses marked on the doors and sides of the houses of the peasants, showing the degradation of the Christian symbol to a similar use. Bibles have been put against doors to keep out the evil spirit. The Swastika use, carried to far distant lands by migrating peoples, would thus be the more likely to lose its original meaning. But the charms now sold in our jewelry stores may, after all, really carry us back, however ignorant the wearer be of it, to the days of the worship of the sun, to the time of the sacred fire.

Any investigation of this symbol is no small theme. One becomes involved in many a closely related problem, each one calling for patient, thorough, judicial study, and often yielding many another question mark. There are the migration of peoples and persons, the tendency of the human mind to express and communicate ideas by symbols, the history of symbolism in art and decoration in general, early religions, superstition and amulets, all most engaging fields of study. To them might be added, as a present day accompaniment, a psychological study of the writers on these themes, their points of view, positive opinions, and differing conclusions.

Appropriately could many an attempt to tell the story of the Swastika close modestly with a line similar to that written of that unique river of our planet, the Jordan, taken from a most interesting work of recent publication: "We have cleared up many mysteries, but have also widened the circle of our ignorance."²⁶

CHARLES DE WOLFE BROWER.

Indianapolis, Ind.

²⁶*The Jordan Valley and Petra.* Libbey and Hoskins.





HITTITE PROCESSION OF 12 MEN [FIG. 7]

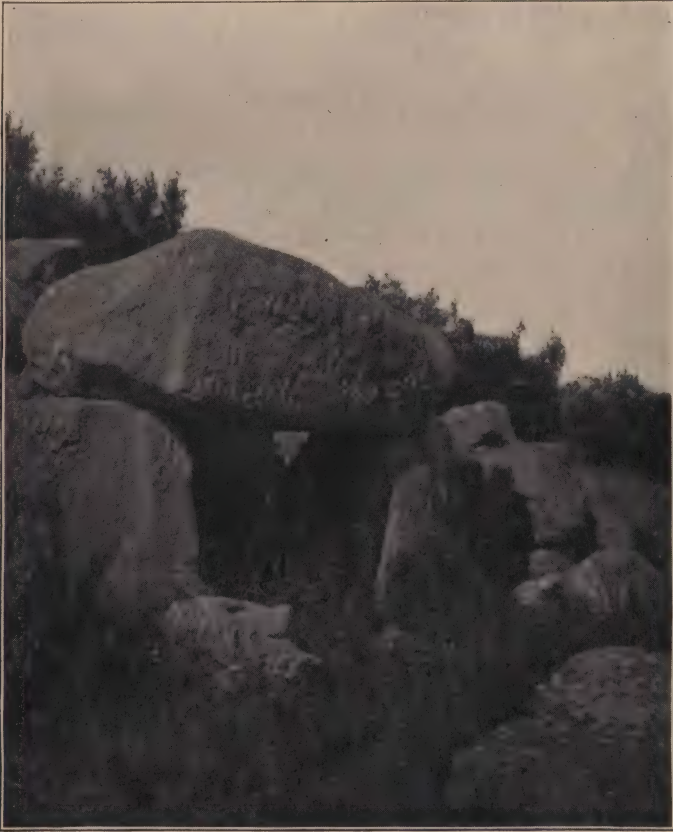
THE HITTITE CAPITAL BOGHAZ-KEUY AND ITS ENVIRONS

IT IS safer not to prophesy until after the event, but the impulse to predict that within a few years the name Boghaz-keuy will sound as familiar as Tel el-Amarna has already become is too strong to be resisted. The site has been known for some years to travelers and archaeologists as that of a Hittite capital of vast extent in comparison with other ancient cities. Yasili-kaya, with its marvelous sculptures, is a suburb, and Eyuk, with its sphinx-guarded temple is but 15 miles away. Bits of cuneiform writing have been picked up on the surface by chance visitors, and several persons have longed to make excavations. It remained, however, for Prof. Hugo Winckler, of the University of Berlin, to secure the funds, obtain permission from the Turkish Government, and, with the assistance of Makridi Bey, of the Constantinople Museum, as field director, in the summer of 1906, to unearth 3,000 more or less broken tablets of baked clay, written in the Hittite language and the cuneiform character. This is the first considerable store of the yet undeciphered Hittite literature for archaeologists to work upon.

Boghaz-keuy is a beautiful Turkish name, meaning "Gorgeville," and is used because the site lies just where a mountain gorge opens out upon a wind-swept Cappadocian upland. Its altitude is above 3,000 feet, and its position is nearly equidistant from Sinope and

Cesarea Mazaca. Similarly Yasili-kaya signifies "Written Rocks," for the Turks do not distinguish between sculpture and writing, and Eyuk means a "mound," and deserves its name.

The outer wall of Boghaz-keuy enclosed an approximate ellipse a mile and a quarter long and more than half as broad. On the south, where the natural defense was weakest, the highest fortifications were constructed. A rampart of earth was topped with a wall consisting of outer and inner faces of dressed stone filled between with rubble. From the crest of this wall to the bottom of the moat, which the rains



POSTERN GATE IN THE WALL [FIG. 1]

of 30 centuries have not washed full of earth, is not less than 150 ft. Much of the rampart is paved with flat stones, which would both hold the earth and make a successful scaling attack almost impossible. A postern gate (Fig. 1), and a tunnel under the rampart at the level of the ground, on the outer side of the moat, saved traffic in time of peace from a long detour. The tunnel is arched above, and this is probably one of the earliest examples of the use of the arch in architecture. Now the tunnel is choked with stones, presumably filled in at the time of the last sad siege of the city.



FOUNDATION STONES OF THE PALACE [FIG. 2]
CARVINGS IN GALERIES AT YASILI-KAYA [FIG. 5]

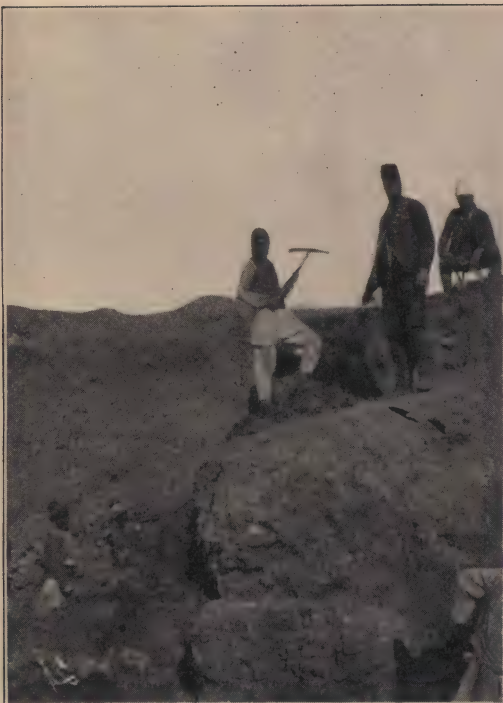
Within the outer wall there were 3 strong castles, forming with the Lion Gate a slightly curved bow, and dividing the higher ground of the city from the lower. The "palace" and other important buildings were in the lower part. No lime was used in these structures, but a clever device held each of the huge stones in place. They were cut smooth on each of their faces, save that an upturned lip was left along the outer upper edge of the dressed block. Thus no stone could slip outward, and massive walls still stand perfectly firm. The "Great Castle," on the eastern flank of the city, occupied an almost impregnable position high on the natural rock that rose sheer from a stream. It was extensive enough to furnish space for an ample grain field now, and enormous quantities of building stones follow the contour of

the walls. The great treasury of cuneiform tablets was found near the main door of this castle, and the "palace" stood on the more genial level ground below.

The palace must have been a very extensive series of structures, and the size of the foundation stones used may be appreciated from Fig. 2, where the persons stand at the ends of stones which are broad and deep in proportion to their length. The main approach to the building was by a cyclopean staircase on the west side, and this led direct to the large central room which was presumably the throne room. Around the other 3 sides of this central *salon* were ranged other rooms, but the entire north end, including just 1-3 of the whole structure, was separated from the rest by a narrow alley or hallway, and apparently constituted the *harem*, or quarters for the ladies of the royal household.

About two miles away are the hypæthral rock galleries, called Yasili-kaya. The larger gallery has a double procession of about 80 figures, carved on the natural rock walls, which have been smoothed in places for the purpose, and meeting at the inmost recess of the gallery. The figures nearest the entrance are about half life size. As the processions advance the stature of their members increases, until the two figures at the head (Fig. 3), the chief priest and priestess, or the king and queen, or possibly the god and goddess, are quite above life size. The priest-king, let us say, stands upon the heads of two subjects or captives; their heads are bent forward, and are covered with the Phrygian cap, which rises to a peak, and also falls forward. His retinue consists of male figures. He holds a battle-axe in his right hand, and with his left extends a curious Hittite symbol toward the priestess-queen, who advances a similar symbol in her right hand. She stands upon an animal, apparently a leopard, and wears a flat-topped mural head-dress. Immediately behind her stands a youthful, beardless figure (Fig. 4), interpreted by Professor Ramsay as her consort-son. He stands on another leopard, and behind him come two more women, whose feet rest upon a double-headed eagle. A huge detached figure in the procession following the priestess is a fine sculpture probably depicting a god. His extended right hand holds a complicated symbol, including a winged disc; his left, a curved lituus; the hilt of a dagger appears at his waist, and his feet, cased in shoes with upturned toes, rest upon two rugged mountains.

In the smaller gallery a pair of figures are thought by some to represent again the consort-son and his mother (Fig. 6). One curious piece consists of a human head above, shoulders formed of lions' heads, and lower parts shaped of two lions' heads downward, the whole being supported on a pedestal, or possibly a sword handle, which runs to a point below. On the opposite wall is a striking procession of 12 men (Fig. 7), about 3 ft. in height, adorned with short tunics, high, ribbed caps, and round earrings, each carrying a short sword or reaping hook over the right shoulder. They may represent a sa-



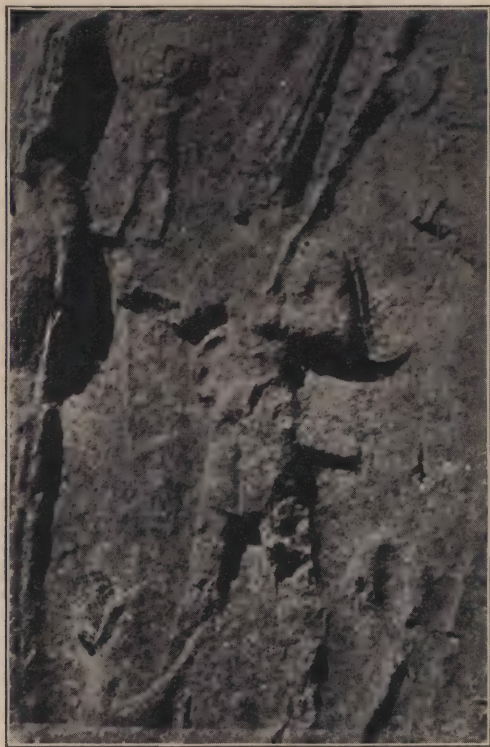
DISCOVERIES AT BOGHAZ-KEUY

A TRENCH [FIG. 11]
 FIGURES IN SMALLER GALERY
 [FIG. 6]

INNER WALLS OF THE DOORWAY
 [FIG. 9]
 FIGURES AT THE HEAD OF THE
 PROCESSION [FIG. 3]

cred march, or a harvest festival, but do not have a military appearance. Indeed all these sculptures suggest worship rather than war.

The ruins at Eyuk are compact, and consist of a small temple, its sphinx-guarded door (Fig. 8), and its double procession of approaching worshippers to the number of about 40. As in the main Yasilikaya gallery a majority of the figures are at the left of one who faces the culminating point. The main room of the sanctuary is only 7 yards by 8 in measurement. This may be compared with the size of the Holy Place in the tabernacle of the Israelites, which was approximately contemporary. Neither could contain a congregation, but only the ministering priests. The solemn sphinxes at the temple door may



YOUTHFUL FIGURE [FIG. 4]

resemble the cherubim used in the Israelite tabernacle, and winged eagles with double heads decorated the inner walls of the doorway (Fig. 9). Amid the sculptured procession moving on basalt rocks toward the sanctuary is an altar (Fig. 10), before which stands a bull on a pedestal, and behind which is a priest with a huge ring in his ear. Close behind the priest a flock of 3 sheep and a goat approach the sacrificial altar, a temple servant leading one by the horn. Compare the description in Ex. xxxii: the Israelite said to Aaron, "Up make us gods;" he required their golden earrings, made a calf "and built an altar before it;" they offered burnt offerings and peace offerings; they



SPHINX-GUARDED DOOR TO THE SMALL TEMPLE AT EYUK [FIG. 8]

ate and drank and gave themselves up to revels and orgies. Israelite worship was in form very like, but in true spirit wholly unlike, the worship of the Hittites and other nations round about. For musical instruments the Eyuk procession depicts a lituus, a (silver?) trumpet and a shapely guitar; the animal kingdom is represented by another bull with a chest or ark on his back, one well-executed lion, and two hares held in the two talons of an eagle; a fine lady sits in a chair with a footstool, holding what seems to be a goblet in one hand and a looking glass in the other; a spring close at hand furnishes all the water ever needed for worshippers and temple ritual.

Professor Winckler discovered at Boghaz-keuy two heavily fortified gates, one of which, flanked by a fine pair of stone lions, is said to resemble the famous Lion Gate at Mycenæ. The theory is growing in favor that Asia Minor, in the second and third millenniums before the Christian era, was a bridge over which some of the civilization and culture of Mesopotamia was passed on to the shores of the Ægean.

The German professor's most valuable "find," of course, was the cuneiform tablets. It is fascinating to stand beside a trench (Fig. 11), and watch the workmen as they carefully turn over the earth and turn out the writings of men who were forgotten 3,000 years ago. A

score or more of the tablets are written in the Babylonian *language*, and so are easily read by Doctor Winckler. The most valuable one is a tablet some 18 in. long by 10 wide and 2 thick, containing a treaty between Rameses II, the Pharaoh of the oppression in Egypt, and Khita-sar, the King of the Hittites in central Asia Minor. This treaty tablet establishes beyond question that Boghaz-keuy and its environs were in a flourishing condition before the age of Moses. As the sculptures are of fairly uniform character and quality, Professor Winckler supposes that the period was not a very long one, and ashes here and there indicate that the place was destroyed and a veil drawn down

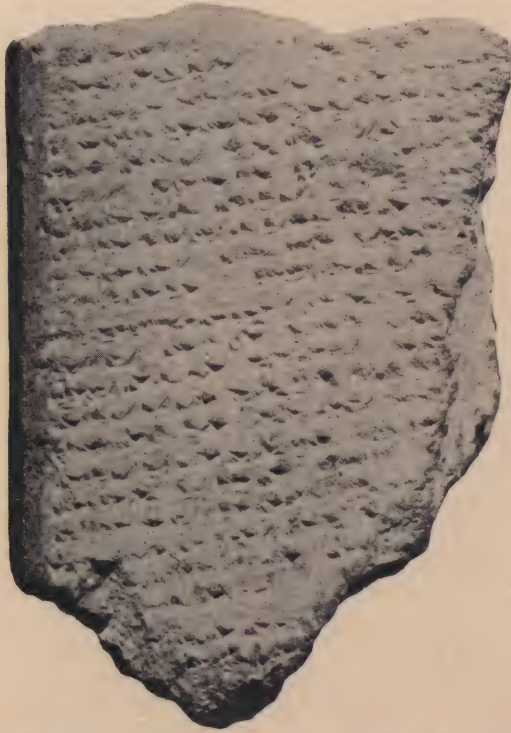


ALTAR AT EYUK [FIG. 10]

over its history by some overwhelming catastrophe. One wonders whether the voice of a Hittite Homer will soon relate to us the annals of a nation, speaking from amidst these dusty bricks! Excavations closed for 1906 not because the store of buried treasure—amid which let not the quantity of decorated pottery fail of mention—was exhausted, but because the season had come to an end. Professor Winckler then expected to return and resume operations in the season of 1907.

Professor Sayce has copied the Boghaz-keuy tablet photographed for this article (Fig. 12), and tells me that it contains a list, appar-

ently, of the products of the mountain Kibis on one side, and on the other certain offerings, the heart, ribs, etc., made to the god Khibe or Khiba. He adds that Abd-Khiba, the Servant of Khiba, is named in the Tel el-Amarna tablets as king of Jerusalem. The city of David, therefore, seems earlier to have had kings of the same race with the soldier Uriah. Professors Sayce and Pinches have just edited for the Royal Asiatic Society a 94-line tablet from Yuzgat, which must originally have come from Boghaz-keuy. These gentlemen had already deciphered certain Cappadocian tablets from Kara Eyuk, near Cesarea Mazaca, written in the Babylonian language, and dated from the age



BOGHAZ-KEUY TABET OF PRODUCTS OF THE MOUNTAIN OF KIBIS
[FIG. 12]

of Abraham, thus proving Asia Minor already to have come within the sphere of Babylonian influence at that early time. It now appears that the Hittites adopted not only the *script* of Babylonia, but numbers of *ideographs*, and "it is these ideographs which have furnished the key" to the Yuzgat tablet, and enabled its editors to include in their monograph a vocabulary of several hundred words. Professor Winckler has not yet begun to publish his tablets. Evidently the decipherment of the Hittite language is just at hand. History is yielding up its dead, and we may watch the process.

GEORGE E. WHITE.

Samsoun, Turkey in Asia.

NEW LIGHT ON BABYLONIAN CHRONOLOGY

RECENT discoveries made in translating Assyrian and Babylonian tablets in the British Museum have cleared up some of the apparent discrepancies between the Old Testament and the Babylonian chronologies, and so have proved to be very important. Several years ago Dr. Leonard W. King, F. S. A., found in the British Museum some new chronicles of the early Babylonian kings, which he has translated. The results of his work have recently been published by Doctor King,* the most important being the discovery that the II dynasty of Babylon was contemporaneous with portions of the I and III dynasties, thus greatly reducing the dates of the I dynasty, and reconciling the Old Testament chronology with the Babylonian and confirming the general belief that Amraphel King of Shinar (Gen. iv), was Hammurabi, King of Babylon, and a contemporary of Abraham.

The statement of these discrepancies in our former chronologies and their complete reconciliation by the recent work of Doctor King is so well expressed by Prof. Robert W. Rogers, of Drew Theological Seminary, in a recent article in the *Christian Advocate*, that we quote the following from him:

According to my chronological scheme Hammurabi reigned 2342-2288 B. C., and the dates proposed by other scholars do not vary greatly from these. (Sayce gives 2376-2333; Winckler, 2313-2258.) If, now, Hammurabi is Amraphel, and Amraphel is a contemporary of Abraham, we come at once into an overwhelming chronological difficulty. Let us see how impossible it is to reconcile these things. According to Exod. 12, 40, Israel was 430 years in Egypt; and according to Gen. 47, 9, Jacob was 130 years old when he went into Egypt; and according to Gen. 25, 26, Isaac was 60 years old at Jacob's birth; and according to Gen. 21, 5, Abraham was 100 years old at the birth of Isaac. These numbers taken together give 720 years as the period from the birth of Abraham to the exodus. But according to Gen. 12, 4, Abraham was 75 years old when he left Haran on his call of God. Therefore, according to Genesis and Exodus, in the Masoretic Text as it has come down to us, the length of time from Abraham's call to the exodus is 645 years. Now recent study has tended very strongly toward placing the exodus out of Egypt in the reign of Merneptah, the successor of Rameses II. The date of his accession is placed by Meyer at 1234 B. C., but most scholars would place him a little earlier. If we place the exodus at 1270 B. C., we shall not be far from the best of recent estimates, but 645 years added to that only brings us to 1915 B. C. But my date of Hammurabi is 2342-2288 B. C., and so we have a discrepancy of nearly four hundred years! But if we accept Archbishop Ussher's date of the exodus, which is 1491 B. C., and add 645 years to that, we still only come to 2136 B. C., and are still confronted with a discrepancy of two hundred years! Now,

**Chronicles concerning Early Babylonian Kings*, including records of the early history of the Kassites and the Country of the Sea. By L. W. King, M.A., F.S.A. Two volumes. London. Luzoc & Co., 1907.

what have I done in this case? I have simply suspended judgment. I have been absolutely convinced that Amraphel and Hammurabi are the same person, but I have said to everybody who thought it worth while to ask me, "I can not explain away the figures. The Old Testament figures can not be reconciled with the figures of the Babylonian Chronicles and King Lists. I refuse to juggle either, and, therefore, must simply await further light."

And now it is extremely pleasant to be able to say that the light has arrived. Doctor King's new book gives us admirably clear copies in cuneiform script of his newly found Babylonian Chronicles, and, with these, a transliteration into Roman script and a translation into English, with most interesting discussions of the effect of the new data on our systems of chronology. Until these discoveries of his were made, all we, who were busying our wits with Assyrian history, were compelled to accept the statements of the Babylonian King Lists that there was a I dynasty of Babylon with eleven kings, of whom Hammurabi, was sixth; that these kings ruled about 307 years, and that following them came the II dynasty with eleven kings, who ruled 368 years, and then came the III or Kassite dynasty, whose kings had such relations with kings elsewhere that we were able to establish synchronisms, and so get definite dates from which to calculate backward into the I dynasty. It was by adding up the figures of the King Lists that I obtained the date 2342-2288 B. C. for Hammurabi, and other scholars obtained similar dates. But now come Doctor King's new discoveries, and prove beyond a doubt that the II dynasty ruled in the Sea Land of Southern Babylonia, and not in Babylon at all, and, further, that certain of its kings were contemporary with certain kings of the I dynasty, and certain others overlap the early kings of the III dynasty. We are, therefore, required to shift this II dynasty, with its 368 years, out of our chronological schemes altogether, and our dates of the I dynasty are reduced by 368 years. If, now, *provisionally and subject to later and more exact calculation of other factors*, I take 368 from my earlier date of Hammurabi, I get the new dates 1974-1920 B. C. for Hammurabi. If, now, the date of the exodus is 1270, and we add 645 years to that in order to reach Abraham's call, we get 1915 B. C., and, lo, there is almost a perfect correspondence, and the big discrepancy has disappeared.

Doctor King has seen very clearly where all this new work of his was leading. He used to wonder whether Hammurabi was really Amraphel. He now writes in this positive manner: "Our new information enables us to accept unconditionally the identification of Amraphel with Hammurabi, and at the same time it shows that the chronological system of the priestly writer, however artificial, was calculated from data far more accurate than has hitherto been supposed." (Vol. I, p. 22.)

And again in another place he says: "We may conclude that the chronology of the Pentateuch, with regard to the length of time separating Abraham from Moses, exhibits far greater accuracy than we have hitherto had reason to believe." (Vol. I, p. 25.)

Personally I have never staked the historical value of the Old Testament upon its chronology. I consider its history quite apart from its chronology, which is obviously in some cases expressed in round numbers, and, perhaps for mnemonic purposes, as it always seems to me to be in the book of Judges at least. But I am glad to find that this chronology stands the test, and that this new discovery helps us out of our difficulty. The world of biblical scholarship, in which it is our delightful privilege to live, is interesting, and daily growing more interesting, and Assyriology is surely a very useful source of new light upon our questions. If critical scholarship has given us some new and difficult problems, it has also helped solve some old ones. Let us be duly thankful for both services.





Photo by Moloney Cashel

ROCK OF CASHEL AS VIEWED FROM THE SOUTHEAST

THE ROCK OF CASHEL

IN THE "Isle of Saints," as Ireland was aptly termed in olden times, there are numerous ecclesiastical remains of enthralling interest, from the examination of which the traveler may derive pleasure and profit, and where he may spend a few hours, the memory of which will remain with him all his life. Mellifont, Limerick, Tintern, Dublin, Athassel, Glendaloch, Kilkenny—the list is inexhaustible. Their interest is enhanced when he calls to mind the fact that some of these places date from the days, truly called the "Dark Ages," when the light of learning and religion was almost extinguished elsewhere, so that students were compelled to come in their hundreds from different parts of the continent of Europe to study in the schools of Ireland. But, perhaps, of all these places, the Rock of Cashel is the most attractive, as well on account of its architectural wonders as its historical associations. Here, within a very small space of ground, may be found a unique collection of buildings of different dates, some half a millenium older than others. The antiquary, the cleric, the artist, the architect, and the tourist will each find something

that will appeal to them. Thanks to the board of public works it is now a national monument, and as such is carefully preserved, and kept in good repair. As a small, single-line branch has been run off the main railway, it can be reached with ease from either Dublin or Cork. The railway station at Cashel seems to have been constructed with a view to arousing the eagerness of the visitor, and whetting his appetite for a "feast of fat things" of antiquity. As he steps out of the carriage he sees in the valley below on his right the gray ruins of



SOUTH DOOR OF CORMAC'S CHAPEL

Hore Abbey, while at the end of the platform the historic rock, crowned by its collection of ruins, rises sheer out of the plain. To be seen at its best it should be visited on a bright summer's day. The dazzling whiteness of the limestone, the emerald green of the country round (some of the richest in Ireland), and the deep blue of the sky, form a picture to which neither pen nor brush could do adequate justice.

Here may be related the legend which is told by the old people as to the origin of the rock. One day the Devil was climbing Barnane Hill, or the "Devil's Bit," as it is popularly called, some 16 miles away. In a sudden fit of diabolical rage he bit an enormous piece out of the hill, and flew away with it. In his flight through the air he dropped some small fragments out of his mouth, which lie in a field close to where this paper was written. St. Patrick, however, was watching him, and by his superior power forced him to drop his mouthful, and in this way the Rock of Cashel came to be where it now is. Who would be so sceptical as to doubt the truth of this story, since both the piece bitten out, and the place from which it was taken, can be seen for miles around! The rock, mapped out by nature as an impregnable stronghold, and furnished with a constant supply of water from a well on the very summit, must have been crowned in prehistoric ages by a stone fort, as the Irish word "caiseal" ("circular stone fort") implies. About the beginning of the V century Corc, King of Munster, took possession of Cashel, and he probably erected one there, as it is recorded that he changed the name of the place from "Shee-drum" ("fairy ridge") to "Cashel." This would have been replaced by an early church, whose site has long since been occupied by later ecclesiastical buildings. It is curious, however, that although Cashel became an archbishopric, having jurisdiction over Munster, yet the sister see of Emly, as a bishopric, was founded 4 centuries earlier.

It will be easily understood that the path leading up from the town to the entrance gate is very precipitous, and this is principally the reason why the cathedral on the rock is now only a ruin. Arthur Price, who was archbishop from 1744 to 1752, unlike Solomon, did not glory in "the ascent by which he went up to the house of the Lord"—on the other hand he felt it too fatiguing to his own legs and those of his horses. Accordingly, in 1749, by authority of an act of Parliament, he unroofed and dismantled the old building, and commenced the erection of the present cathedral in the town. But for this unjustifiable act of vandalism the historic pile would still be filled with the incense of prayer and praise.

The first building of interest to be noted is the College of the Vicars Choral, who were attached to the cathedral, and had certain lands set aside for their maintenance. It is a late structure, dating from the XV century. When the visitor passes through the entrance gate his eye at once falls on what is perhaps the most interesting relic in the whole place. He will see a large stone, foursquare, on each face of which may be discerned dim traces of spirals and concentric circles, typical specimens of early Celtic ornamentation. It is said that this was the seat on which the ancient kings of Munster were crowned. Placed on this as on a pedestal, and emblematic of the triumph of Christianity over Paganism, is a stone cross. One arm is broken off, while the remaining one is supported by an upright of stone, a feature which renders this unique among the Celtic crosses of

Ireland. On one side is St. Patrick in the act of benediction, while on the other is carved Our Lord, fully draped. This is in accordance with the ideas of the Eastern Church, as the West always represent Him with merely a loin-cloth. A few yards from this is the south door, through which entrance is made into the cathedral. This venerable weather-beaten pile, dating from the XIII century, is cruciform in plan, with two small chapels off each of the transepts. At their in-



INTERIOR OF THE OLD CATHEDRAL, SHOWING CHOIR AND CHANCEL,
WITH REMAINS OF THE EAST WINDOW

tersection with the nave rises the belfry tower, the roof of which is groined. A curious fact will be noticed here, namely, that the nave is much shorter than the chancel—the reason is that the Archbishop's Palace had to be fitted in at the west end, and the space available for building purposes was very limited. In 1649, Murrough O'Brien, Lord of Inchiquin, stormed the rock, and massacred a large number of peo-

ple within the sacred precincts. Not until Trinity Sunday, 1727, were services held here again, and then only for a few brief years, till Price's act of destruction.

The tombs and inscriptions in the cathedral are not very numerous in comparison with other places in Ireland. In the nave is an arched tomb with curious remains of old stucco work. In the north transept is a magnificent altar-tomb, with carvings of grotesque animals, belonging to the O'Kearney family, who were the hereditary guardians of St. Patrick's crozier. By it is a slab with the twelve apostles cut on it, each with their own peculiar emblem. St. Peter has an enormous key, St. Philip has the "five loaves" of the miracle, while St. James holds something suspiciously resembling a hurley, as used to this day in the national game. There are many beautiful specimens of the stone-cutter's art hard by, two of which deserve special mention. One is the head of a devil, into whose features the unknown artist has succeeded in infusing a mingled expression of cynicism and contempt. The other is a nude, armless, female figure, in high relief, with the legs twined round each other. It is supposed to have come down from pre-Christian times, and closely resembles those carvings, called "Sheela-na-gigs," which are frequently found built into old castles, and are said to have been placed there as charms.

The chancel, which next comes under consideration, was burnt by the Earl of Kildare, in the reign of Henry VIII. When brought up for trial he justified his action by declaring that he did so because he thought the archbishop was in it. The feeling of the latter, who was present in the court at the time, may better be imagined than described. In the north wall is the tomb of Archbishop Malcolm Hamilton, a Scotchman, who died in 1629. The inscription is all defaced, by, it is said, Baron Purcell, of Loughmoe, and his soldiers.

Opposite this a recumbent effigy marks the spot where lie the mortal remains of the notorious prelate, Archbishop Miler Magrath, "that wicked Milerus," as an old writer terms him. He had been originally a Franciscan friar, but turned Protestant, and became Archbishop of Cashel, in 1570. Of him it might truly be said that he was one of those grievous wolves who entered in and spared not the flock. He held several bishoprics together with his archbishopric, in addition to numerous rectories, vicarages, and dignities in different parts of the country; he alienated church property, pocketed church money, and filled all available livings with his own friends and relations. On one occasion he appointed his son, John, a boy 10 years of age, vicar of a parish, in order that the clerical income arising therefrom might pay his school fees, while the Protestant [*sic*] curate was a Roman Catholic priest, about 85 years old. He died in 1622, in what can hardly be termed, in his case, the "good" old age of a hundred.

At the angle formed by the south transept and the nave rises the Pentagon Tower, up which runs a winding stairs of 122 steps, by

means of which access can be had to various parts of the building. From the summit of this tower a view of the surrounding country may be had, which, if seen to advantage on a clear day, will indelibly impress itself on the mind. Away to the west, toward the historic town of Tipperary, renowned in ancient and modern times, stretches the broad level plain, dotted here and there with buildings of different ages, while on the extreme left the Galtee Mountains stand out clear and sharp against the summer sky. In the hollow beneath lies Hore Abbey. Anent this latter place the following curious tale is told. It was originally founded for monks of the Benedictine Order, but David MacCarwell, who was archbishop in 1253, having dreamt one night (as he said) that they tried to assassinate him, violently dispossessed them, and gave it to the Cistercians. On the south side, so close to the rock that it seems as if a stone could be thrown from the battlements into the garden, stands the later Palace of the Archbishops, now used as the dean's residence. It is a noble, picturesque mansion, with lofty chimney-stacks, and red-brick facing, whose bright tints are mellowed and softened by the hand of time. To the east of it, flowing like a sea to the very base of the rock, is the town of Cashel, anciently a walled city, with its narrow winding streets betokening a great antiquity, while here and there the hoary remains of an abbey or a castle rise above the modern roofs.

At the west end of the cathedral, and built on to it, is the old Archbishop's Palace, in reality a strong castle. Even the most superficial observer will notice that the original builders planned the place with a view to war as well as worship, so solidly is the whole constructed. This is not in as good preservation as the other buildings owing to the fact that a large piece fell down on the 23d of February, 1848, the day on which Louis Philippe fled from France. In order to economize room all the staircases are in the thickness of the wall, and the visitor will almost lose his way as he wanders along narrow, gloomy passages, ascending and descending in his course precipitous flights of steps which are as steep as a ladder. In the rooms of the palace there are no architectural beauties to be noted—it was built for safety, not for appearance.

Abutting the north transept is the conical-roofed round tower, which is one of the most perfect specimens of these curious structures to be found in Ireland. As has been remarked, building room was limited, the more so as this tower and Cormac's Chapel held the ground first, and so threw more difficulties in the way of the architect of the later cathedral. But he, whoever he was, full of the unrivaled skill of the great master-builders of yore, used every available inch to the best advantage, and managed to fit in carefully between the two an elegantly proportioned church. Various and wild were the theories put forward by the older school of Irish antiquarians as to the use and purpose of these round towers. They were fire temples—they were emblems of phallic worship—they were pillars on top of

which saints lived after the manner of Simon the Stylite—they were even lighthouses. It is now generally held that they had inside several wooden lofts or floors, connected by ladders, and served various purposes in time of peace, such as watch-towers, belfrys, and strong-rooms for the bestowal of treasure of church property. When war arose the ecclesiastics and people could retire into them, as the door is generally about 9 ft. off the ground, and as the wall is enormously thick there, it formed an impregnable fortress, on which fire could have no effect, and which no foe could take by assault.

Last, but by no means least, there is King Cormac's Chapel, nestling in the angle formed by the south transept and chancel. It is the most perfect specimen extant of the Hiberno-Romanesque style of architecture, and would need a separate paper to adequately describe it. Outside, its high-pitched stone roof, its arcaded walls and deeply recessed north and south doors, with characteristic moulding and beadings—inside the different carvings on the pilasters, the dim traces of old colored frescoes, the chancel arch, and the groups of grotesque heads—all betoken this the most wonderful church of its kind in the country. At the west end of the building stands an enormous stone sarcophagus, or baptismal font, known generally as "King Cormac's Coffin," and exhibiting on the side exposed to view a beautiful specimen of Celtic interlaced work. Outside the north door is an arched recess, where was discovered a bronze crozier, now preserved in Dublin. Over the nave is a lofty and spacious apartment ceiled with calc tufa, a substance found at the bottom of stagnant lakes. There is a fireplace here without a chimney, while at the side of it there are square holes which run along the walls on the level of the floor and seem to be an anticipation of the most modern hot-air arrangements. Two curious points will be noticed almost at once: First, that although placed side by side with the later Cathedral, the axis of the one is not parallel to that of the other. This is explained by the fact that churches were always placed facing the exact spot where the sun rose on the morning of the feast-day of the saint to whom they were dedicated, but, as the sun does not rise in the same point all the year round, the line of orientation of the two is different. Secondly, the chancel arch is not in the exact center of the building, but inclines considerably toward the south wall. This is said to be borrowed from the East, and is supposed to represent Our Lord's drooping head, as He hung on the cross. According to some authorities this chapel was built by Cormac MacCullenan, the King-Archbishop, author of the "Psalter of Cashel," and "Cormac's Glossary," who, a veritable member of the "Church Militant," fell at the fatal battle of Ballaghmoon in 907; according to others the founder was King Cormac MacCarthy, in 1134. Possibly the nearest approach to the truth is that the former commenced, while the latter completed or renovated it.



THE OLD CROSS—THE FIGURE OF ST. PATRICK

These unique relics of antiquity have been all too briefly dismissed in this paper. But enough has been said, it is hoped, to enable the reader to gain some knowledge of them, and to encourage him to visit them if ever opportunity arises. The rock has been recently compared to the Acropolis of Athens, and certainly there are striking parallels between the two places. Both were strongholds of war and religion, covered with buildings of different styles and dates. The Parthenon and Erechtheum of the one correspond to the cathedral and little chapel of the other. But there is also a vital difference. If the Irish Acropolis is left in dim obscurity by the historical splendor of the Parthenon, on the other hand the gods of the Athenian hill have faded out before the moral greatness of the faith preached upon the Rock of Cashel.

ST. JOHN SEYMOUR.

Dover, Thurles, Tipperary Co., Ireland.

INTERDEPENDENT EVOLUTION OF OASES AND CIVILIZATIONS

IN THE presidential address of Mr. Raphael Pumpelly, a year ago before the Geological Society of America, certain interesting conclusions were reached concerning the early development of civilization in Central Asia. His study of the topographical and climatic conditions of Turkestan lead him, in the main, to the same conclusions regarding the loess in Central Asia as those entertained by Baron Richthofen, namely, that wind has been the principal means of its distribution. The only places in this region where life could be conceived were in the deltas of rivers where they come down from the mountains and disappear in the desert, and it is in these favored spots that he finds earliest evidences of civilization. At Anau, near Askabad, 300 miles east of the Caspian Sea, he made extensive excavations, which are described in his address. In the center of the delta stand "two hills, a half a mile apart, and the ruined city of Anau one mile from both." These kurgans are composed of layers, the remains of human occupation, presumably thousands of years old. They denote different degrees of culture, from most primitive up to a much higher degree, and followed again by a lower. The excavations proved that the northern hill, "which is 60 ft. high from its base below the plain, is the older, and represents 6 different populations" from the present time down through the historic, the iron, and copper stages into the Stone age.

The oldest of these are represented by a fairly good pottery ornamented by geometrical designs. They evidently understood the art of spinning, and used the bottomless bake-oven that is still in use in some districts. It is most interesting to observe by what common steps primitive peoples express their ideas, no matter how entirely independent of each other they may have been. From these people, who in all probability antedate the earliest known Egyptian dynasties, through almost all peoples who have been studied down to the Philipines of to-day, we find evidences of this natural skill in the use of conventional design, proving, we think, very conclusively that it is a natural expression, not an inherited one. One still sees in some parts of the East to-day the clay oven heated by a fire made within it on the ground. These people were hunters, and they must have used spear-heads or arrows, but they had no axes nor arrow-points of stone.

Doctor Duerst, of Zurich, examined large quantities of bones found in the lowest 10 ft., and found that they were acquainted with only wild animals, and that from those they had domesticated the sheep and ox, and of the latter they had succeeded in establishing three breeds. He was able "to trace the progressive changes in texture of bone substance and in the character of horns during many centuries of progressive domestication." The horse appears to have been used,

and that presents the question of how he reached that people from America, where it has been thought he originated. They also imported a domesticated pig and goat from Persia. Doctor Duerst identifies one of the breeds of pigs with the "turbary pigs" of prehistoric Europe. This is, therefore, the first discovery of the origin of domestication and of the region from which the world derived the greater number of its useful animals.

These people were followed by another with a different kind of hand-made pottery, and they had in use the camel and used copper to a limited extent. This was the last civilization to occupy the northern kurgan. After them the south kurgan was started, and the remains accumulated to a height of 60 ft. They had advanced to the use of the potter's wheel, the full knowledge of the use of copper, and some knowledge of lead, but they had no knowledge of bronze. "Out of 23 objects analyzed by Professor Gooch, a ring and a small implement, contained under 6 per cent. of tin; a dagger, 1.58 per cent; another small object, 1.65 per cent." With the exception of these 4 no others contained any tin.

All of these three civilizations mentioned had a very singular burial custom. That was the burial of children in a contracted position under the floor of the houses.

This people was followed by one of much lower culture. Their pottery was ruder, and they themselves were supplanted by a people who used iron. Not in the kurgan, but near at hand, the city of Anau was founded soon after the beginning of our era.

Evidently this district was once subject to much more moisture than at present, else we should not find evidence of such extensive population. Irrigation is doubtless essential to the maintenance of any extensive life at the present time. In the shafts sunk at the present in the city of Anau glazed pottery was found down to 5 ft. above the lowest culture. In the ruined city of Ghiaur Kala, in Old Mery, "fragments of glazed pottery were found down to a depth of 20½ ft., where they were associated with Sassanide coins of the III century A. D." It seems likely that glazed pottery was introduced into Persia from Mesopotamia.

Mr. Pumpelly has made the following calculation, taking everything into consideration:

- "Founding of Anau.....about 370 A. D.
- Beginning of Iron culture.....in IV century B. C.
- Founding of south kurgan and introduction of the
potter's wheelabout 3750 B. C.
- Base of upper (ænolithic) culture of north kurgan,
.....about 6000 B. C.
- First domestication of animals, beginning with the long-
horned ox out of *Bos namadicus*. .about 8000 B. C.
- Founding of north kurgan.....about 8250 B. C."

PALESTINE EXPLORATION FUND

NOW that the work at Gezer is taken up again, Mr. Macalister's reports are easily first in interest. He at once found what are believed by him and others to be Philistine burials, and he thus opened up the quest for the remains of a people much mentioned in the Bible, but little known outside of it. In the objects which he figures are a silver ladle, a silver bowl, a bronze mirror, two gold bracelets, several ornamental beads, and a silver signet-ring. But his most interesting object is a bar of polished jasper an inch and a half long, with 3 belts of gold upon it, having a loop of gold to each belt. He believes those objects to have been buried with a Philistine princess, for reasons given. A small stone altar is also figured, showing the top squared and hollowed, with corners elevated like a short horn, "the horns of the altar."

It is now only a question of money whether or not this *tell* is completely excavated in the permitted two years. We have the place, the permit, and, most important of all, the skilful excavator. Shall he be enabled to employ a sufficient force of work people? The Ropes sisters, of Salem, Mass., have left by will to the Fund \$2,000 apiece, and it is hoped that at least some of this amount can be received in season to help, but now is the time to work.

An Austrian company has begun to excavate at Jericho, and it is rumored that an excavation of Samaria will be made by Americans under Professor Reissner.

It is pleasant to chronicle that Dr. Selah Merrill, on leaving Jerusalem for his new consular post in South America, received a testimonial of respect in the form of an address signed by about 100 Palestinian clergymen, teachers, and others, who expressed their appreciation of his services to them and others. His service to Biblical archaeology is also very great and very long.

It is still unsafe to go about alone in Palestine, as an Englishman walking by himself from the Sea of Galilee to Safed found to his cost, for he was waylaid by two men, was beaten and robbed, and was made ill for some time after reaching a place of safety. Under energetic action by the British consul at Safed, the village from which the men came was ascertained, and soldiers were quartered there until the stolen property was given up.

At the recent annual meeting of the Fund the Rev. Prof. Francis Brown, of Union Theological Seminary, New York, was added to the General Committee, which now has 10 American members.

The question of the location of Mount Sinai was lately raised by the fact that the International Sunday-school lessons covered the Pentateuch during the spring and summer. The unsettled feeling

in regard to its location appeared in the Lesson Quarterlies. One of them spoke of Jebel Musa and Jebel Serbal as having equal claims, and added that Doctor Sayce and some others "are disposed to find the true Sinai outside the Sinaitic peninsula, in the land of Midian, but the majority of scholars adhere to the traditional site, Jebel Serbal."

Here is a balancing of opinion, leaving thousands of teachers and scholars in doubt. We think of the teachers pointing to Serbal first, and then going on to Musa, and then indicating in a general way the land of Midian, and saying: "Perhaps, after all, it was there that the law was given and the Israelites never saw the Sinaitic Mountains." Under these circumstances no distinct scene can be brought before the minds of the scholars, and no picture of the place can be left on their memories. This is most unfortunate for the cause of Bible study. How can a historical book like Exodus have its influence and make its proper impression if no idea can be formed of its fundamental facts?

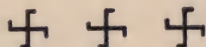
The remedy for this unhappy condition is already existing. The exploration by Prof. E. C. Palmer, continuing for several months, revealed the true Sinai, because it found that Jebel Musa is the only mountain entirely fulfilling the requirements of the narrative. It not only affords in the combined valleys before Ras Sufsafeh the only place for the congregation of Israel to stand before the mount, but the approach to it alone affords the scene for the battle of Rephidim. Palmer's *Desert of the Exodus*, written in the scientific spirit, is the only commentary needed upon Exodus as regards its geographical aspects.

Serbal is a noble mountain, but does not meet the conditions, as Professor Petrie may see when he makes an equally close study of Musa. As for the vague negative suggestions of Midianite Mountains, unexplored and unnamed, no good certainly can come of such wild and unscientific talk. Teaching, to be assured, must rest on scientific exploration and not on mere questionings.

THEODORE F. WRIGHT,

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PROTO-CORINTHIAN VASE FROM ROMAN FORUM.—

In one of the primitive graves laid bare by Signor Boni, in the Roman Forum, a small Greek vase of the Proto-Corinthian period was discovered. The value of this find can hardly be over estimated as it determines the date of this early strata in the very center of Rome. The date of the Proto-Corinthian ware is from 750 to 650 B. C., although some of them belong to a slightly later period.

EGYPTIAN RESEARCH ACCOUNT*

PROPOSED EXCAVATIONS AT MEMPHIS

ONE of the greatest capitals in the ancient world has been left buried in its dust, although the ground is visited by thousands of tourists every year. Memphis, whose history extends over the whole course of Egyptian history, has never yet been excavated. It contained the finest school of Egyptian art, and in antiquity and wealth it was unrivalled. But most of it has gradually passed under the plough, and to rescue what yet remains is most needful before it further disappears. This will necessarily be a great undertaking, like that of France in the clearing of Delphi or of Germany at Olympia. It is upon a public association of subscribers that all such work must depend among us; and the Egyptian Research Account has now undertaken this work, trusting that the public will support it worthily.

The sites of the temples of Memphis lie clearly visible between the mounds of the ruins of the city. They cover more than 100 acres, an extent greater than all the area of Karnak. The chief temple was that of Ptah, a vast building which had been added to by the piety of kings throughout the history. First founded by Menes, and doubtless rebuilt magnificently by the pyramid kings, the temple was enlarged by a great pylon on the north, erected under Amenemhat III. Then Ramessu II built here, on an enormous scale, and added colossi in front of the temple, and Ramessu III built a portico facing to the west. Psammitichos built a southern portico, and also the court for the sacred Apis, which, as Herodotus says, was surrounded by a colonnade and full of sculptured figures, while, instead of pillars, statues 12 cubits high were placed under the portico. Aahmes added an immense colossus 75 ft. high before the temple.

A temple of Isis adjoined that of Ptah, a spacious and magnificent building worthy of the capital. And perhaps the most interesting point of the whole site will be the "very beautiful and richly adorned" temenos, south of the temple of Ptah, in which stood the temple of the foreign Aphrodite, surrounded by the Tyrian Phoenicians. This foreign quarter must have been the emporium of Egyptian trade during the prehistoric ages of Greece, and here we may hope to find the remains of the early civilization of the Mediterranean. Thus the site

*The whole of the results of the Egypt Research Account are published in the Double Volume each year (given to all subscribers of ten dollars and upward), and a smaller edition gives most of the material of general interest for subscribers of five dollars. Address HON. SECRETARY, EGYPTIAN RESEARCH ACCOUNT, University College, Gower Street, London, W. C., England; or Rev. Dr. WINSLOW, 525 Beacon Street, Boston, U. S. A.

promises to be of the first importance, not only for the beginning of the Egyptian kingdom under Menes, its founder, but also for the later connections with the rest of the world.

The temples were standing, like the ruins of Thebes, down to 700 years ago, but were finally removed for building material to Cairo. The foundations and sculptures now lie beneath cultivated fields, owned by the villagers of Mitrahineh. The great colossus and a few other statues have been found here, and it is encouraging to see that all of them have their faces unbroken. The clearing of this site, with gradual exchanges of land as required, will occupy many years, and it is estimated that an expenditure of about \$15,000 annually for about 15 years will be required to excavate the temple sites, apart from the city. As half of the discoveries will be granted by the Egyptian government, this clearance is certain to yield a considerable return to those who undertake the work.

The work of the past season has been more successful than usual in the discovery of objects, and has added to our archaeological knowledge. The first, second, and third dynasties have been tracked at Gizeh, and the civilization soon after the founding of Memphis has been proved to have been exactly equivalent to that of the south at Abydos. Many vases of stone, and objects in ivory and flint, have been obtained of this remote time, centuries before the pyramid builders. A large funeral chapel of the XXVI dynasty was also found, containing four chambers; it was built for a commissary named Thary, and it has been left in place and earthed over again by the department. A large amount of anthropological material of the later times has been brought to England for study.

At Rifeh, near Asyut, a very fine tomb equipment of the XII dynasty was found, of the best work and in perfect condition; the two coffins covered with painting, the canopic box, two boats, and five statues are of the first quality. A long series of pottery soul-houses [See RECORDS OF THE PAST for July, 1907] have been recovered which explain this curious development of religious thought, and explain the appearance of the actual dwellings of the peasantry in the Middle Kingdom, with the details of construction and of furniture. This is the first time that this interesting subject can be regularly and completely studied. Much else was discovered of this age and of later times; and early Coptic settlements were excavated which yielded stone inscriptions and carvings, papyri, leaves of parchment MSS., and various other remains. It is intended to carry on some work in this same region next winter, before the ground is sufficiently dry to work at Memphis.

EDITORIAL NOTES

COFFINS FOR MICE.—Professor Garstang has discovered at Abydos, Egypt, a number of small coffins for mice, with figures of mice on the top. These belong to the Ptolemaic period.

CAUSE OF PREPONDERANCE OF CONSONANTS IN NORTHERN LANGUAGES.—In a recent book by Col. L. A. Waddell, on *Lhasa and Its Mysteries*, he puts forth the theory that the excess of consonants in the Tibetan, Russian, and most Arctic languages had its cause in the cold climate, which leads the people to keep their mouths nearly closed, while talking, in order to exclude the cold air.

OLDER CITY AT TIRYNS.—It is announced that Doctor Dörpfeld in continuing excavations at Tiryns has found an older prehistoric city underneath the one which Schliemann excavated. This lower city has none of the extensive system of galleries and fortifications characteristic of the later city. Thus it seems to approach in style of architecture the Cretan palaces at Cnossus and Phæstus.

LATIN GUIDE THROUGH ROME.—In a collection of Egyptian papyri Prof. Jules Nicole is reported to have found among some Greek texts an ancient Latin guide through Rome. As it contains an inventory of sculpture and indicates the locality where each piece was located, as well as describes each, it may prove of importance in supplying us with data for the attribution of as yet nameless statues.

ANCIENT GLASS MIRRORS.—A scientist who has recently been engaged in researches concerning ancient glass mirrors in Thrace and Egypt has come to the conclusion that the metal used to back them was almost pure lead. He believes that they were manufactured by pouring the molten lead on the concave surface of discs cut from balloons of blown glass.

EXCAVATIONS ON THE PALATINE.—While trying to determine the entrance to the Palatine Acropolis, as well as to explore the Necropolis, excavators in Rome are said to have found a circular ditch, either a pit or a tomb. Similar pits have been discovered in the Roman Forum. This is believed to be connected with the earliest habitation, and to have been constructed by founders of the Palatine stronghold.

PLAN TO EXCAVATE LOCRI AND CROTONA.—According to reports, Prof von Duhn, of Heidelberg, has proposed to the Italian government a plan for excavating the cities of Locri and Cro-

tona, in Magna Græcia. Both these cities were founded in 800 B. C., and were noted for their temples. The former was the place where the first written code of laws was drawn up by Zaleuous, and the latter was connected with Pythagoras.

NUBIAN EXCAVATIONS.—Dr. George A. Reisner, formerly in charge of the University of California work in Egypt, has been appointed by the Egyptian government to take charge of archæological investigations in Nubia. The work will involve continuous excavations on both sides of the Nile, from Kalabsche to Derr. This is in anticipation of the raising of the dam at Assouan. Temples are to be restored, inscriptions copied, and buried monuments excavated.

STATUE OF LEDA IN THE BOSTON MUSEUM.—Owing to the liberality of the late Henry Lillie Pierce, the Boston Museum owns an early Greek marble inspired by the story of Leda and the Swan. Its style indicates the late V century B. C. as its date. Leda is springing forward to protect the swan. The pose and execution indicate that the figure was intended to be viewed from the right side, so it is probable that it had an architectural setting. The work is vigorous, but the technical power was imperfect.

FINDS IN TURKISTAN.—It is reported that Dr. N. A. Stein has made important archæological discoveries in Chinese Turkestan. On an ancient village site he obtained a rich yield of antiquities, including records written on wooden tables in the script of the Kharosth. At Miran over 1,000 Tibetan documents were found. In a ruined Buddhist shrine were discovered many interesting art remains, some closely related to the Greco-Buddhist sculpture of the first century A. D.

CHRISTIAN RUINS SOUTH OF ALEXANDRIA.—Karl M. Kaufmann is reported to have found in the desert south of Alexandria an extensive field of Christian ruins. In this are included the remnants of the memorial church of the Alexandrian martyr Menas, two other Basilicas, and the site of a great Egyptian clay and pottery industry. A second expedition is to be sent to the same region. The modern name of the ruins is Boumna Karn Abu'm. The ancient city was still flourishing in the X century.

PROF. G. FREDERICK WRIGHT IN ENGLAND.—Professor Wright sails on September 6 for Antwerp, and after a short stop in Holland will cross to England, where he will deliver a series of lectures along the line of his recent book on the *Scientific Confirmations of Old Testament History*. He will also make some supplementary observations on various geological phenomena in southern England. His address will be Union of London and Smiths Bank, Limited, 2 Princess Street, London, E. C., England.

A Dutch translation of Professor Wright's new book has been made, which is to be issued in Holland in October, with an introduction by the celebrated Doctor Kuyper, late Prime Minister of Holland.

NILE BOAT MODELS.—There have been discovered in the "tomb sanctuary" of King Mentuhetep, models of Nile boats with their crews complete. The figures on the Royal Barge are kneeling around the figure of the King, who is deified as Osiris, as he passed on his last voyage down the Nile. These were discovered in a chamber of polished granite built deep in the mountain side and reached by a gallery 500 ft. long. In this chamber of beautifully polished blocks of granite faced in parts with slabs of alabaster, stood a "great *naos* or shrine of splendid alabaster blocks, with beams of red granite supporting the alabaster roof." Although no coffin was found the usual appurtenances of an XI dynasty burial were scattered over the floor of the chamber. Professor Naville is "inclined to believe that this hypogæum is not the actual tomb of the King, but rather a sanctuary of the royal *ka* [a man's spirit or double] made in the form of a tomb and provided with all the usual furniture of the tomb of that period as would befit a 'house of the *ka*.'"

DOCTOR FEWKES' WORK IN THE SOUTHWEST.—Last year Dr. J. Walter Fewkes spent the winter in excavating and preserving the magnificent ruins of Casa Grande. During this time he was able to excavate over two-thirds of the area, strengthen and protect the walls, and restore them in places. This autumn he will return to Casa Grande and complete the work which will insure the permanent preservation of this ruin, which has been superficially looked at and photographed by many scientists and museum expeditions, but never systematically studied. The Smithsonian Institution is to be specially commended for taking up this important work, and congratulated in securing the services of so enthusiastic and skilful a man as Doctor Fewkes for this work. After completing the work at Casa Grande, Doctor Fewkes will go to the Cliff Palace in Colorado for the remainder of the season to work on that ruin. Here he will do some excavating, but more time will be devoted to strengthening the walls of the Cliff Palace, which are in bad condition and liable to fall. This ruin, from its striking position in the cliffs of Mesa Verde, is of fully as great interest to the general public as the Casa Grande ruins.

MARKING THE SANTA FE TRAIL.—The first monument marking the site of the old Santa Fe trail in Colorado was erected on August 16, of this year, near Lamar. The Colorado Daughters of the Revolution were the prime movers in this work of preserving the location of this historic trail.

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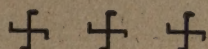
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